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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,920	09/29/2000	Gary D. Zimmerman	10001745-1	8995
57299	7590	01/13/2006	EXAMINER	
AVAGO TECHNOLOGIES, INC.			PHAM, THIERRY L	
P.O. BOX 1920			ART UNIT	
DENVER, CO 80201-1920			PAPER NUMBER	
			2624	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/675,920

Applicant(s)

ZIMMERMAN ET AL.

Examiner

Thierry L. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

- This action is responsive to the following communication: Response to RCE and Restriction/Election required filed on 10/14/05 and 12/19/05 (respectively).
- Claims 1-9, and 16-18 are pending; claims 10-15 are withdrawn from consideration.

#### ***Election/Restrictions***

Claims 10-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/19/05.

Applicant's election with traverse of Species I in the reply filed on 12/19/05 is acknowledged. The traversal is on the ground(s) that species I and II do not require separate technology classification, would not warrant separate status in the art, and would not require a separate field of search. This is not found persuasive because species I and II are both distinct inventions and require different field of search and consideration, for example, species I (figs. 1-4) is drawn to a PC card and wherein species II (figs. 5-7) is drawn to a system for determining compatibility of computer software embedded within PC card.

The requirement is still deemed proper and is therefore made FINAL.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "Laser office machine" as cited in claims 7-8 is unclear. Is it a laser printer or a device that generates laser light signals? The examiner is unable to locate any terms relating to "laser office machine" within an original filed specification. Clarification is required. In addition, nowhere within an original filed specification indicates an office machine is a laser

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printer other than the applicants' admitted prior art; according to the applicants, "laser printers" are well known (pages 1-3).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Young No (US 6587140).

Regarding claim 1, Young No discloses a printing system (*printing system, fig. 1*) comprising:

- a host device (*host device 1, fig. 1*) for executing programs;
- an office machine (*printer 5, fig. 1*) having a print engine for receiving print engine ready data (*col. 4, lines 39-42*) and based thereon for rendering images and a PC card slot (*PC card slot 83, fig. 1*) for receiving PC cards, wherein the office machine does not have a printer controller (*printer controller is incorporated within a PC card 7, therefore, printer 5 does not have a printer controller, figs. 1-2, col. 2, lines 1-37 and col. 4, lines 39-62*); and
- a PC card (*removable PC card 7, fig. 1*) for removably coupling with the PC card slot (*PC card slot 83, fig. 1*) of the office machine and for coupling with the host device (*host device 1, fig. 1*), the PC card having a printer controller integrated circuit (*PC card 7 includes an intelligent circuit 90, fig. 2*) for providing printer controller functions (*printer controller functions, col. 4, lines 25 to col. 5, lines 32*), the printer controller integrated circuit for receiving printer controller ready data from the host device (*image data from host device 1, fig. 1, col. 2, lines 1-38*) and based thereon for generating print engine ready data (*col. 4, lines 39-42*), wherein the office machine requires the PC card with printer controller (*printer 5 requires PC card 7 to operate, col. 1, lines 53-60 and col. 2, lines 9-38*) to be coupled thereto to render images, but Young No fails to teach and/or suggest wherein the PC card incorporated with

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printer controller may be replaced or upgraded by a user intervention of the manufacturer of the office machine.

It is well known in the art that a defected and/or out-dated PC card can be replaced with a newer and/or most updated PC card manually by a user since a PC card as taught by Young No is detachable and removable. If a current PC card is failed and/or defected, one of ordinary skill in the art just simply order a new PC card to replace a defected one or send a defected PC card to fixed and then manually installed by a user without having to send a whole printer to the manufacturer. By replacing a defected PC card with a compatible PC card by a user reduces the costs and time of having to ship the whole printer to the manufacturer.

Claims 2-9, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young as described in claim 1 above, and in view of Benjamin et al (U.S. 6113208).

Regarding claim 2, Young teaches a PC card having a memory device for storing printer's operating program (DRAM 98, fig. 2, col. 2, lines 25-30, Young), but fail to teach printing software having an automatic update module that when executing on the host device automatically downloads to the host device from a source one of an device automatically downloads to the host device from a source one of an updated version of printer formatter firmware and the printing software.

Benjamin, in the same field of endeavor for printing, teaches wherein a printing software having an automatic update module that when executing on the host device automatically downloads (automatically downloading updated/version of printer driver via Internet/Website, col. 3, lines 50-67 to col. 4, lines 1-40) to the host device from a source one of an device automatically downloads to the host device from a source one of an updated version of printer formatter firmware and the printing software.

It would have been obvious to one of ordinary skill in the art at the time of the invention wad made to modify Young as per teachings of Benjamin because of a following reason: (1) downloading and installing the latest/newest compatible printer driver will improve operating efficiency of the printer.

Therefore, it would have been obvious to combine Young with Benjamin to obtain the invention as specified in claim 2.

Regarding claim 3, Benjamin further teaches the printing system of claim 2, wherein the source is one of a web server (Internet web server, col. 3, lines 50-67 to col. 4, lines 1-40) and a computer readable medium.

Regarding claim 4, Benjamin further teaches the printing system of claim 2 wherein the automatic update module when executing on the host device automatically downloads (automatically downloading updated/version of printer driver via Internet/Website, col. 3, lines 50-67 to col. 4, lines 1-40) to the printer formatter an updated version of printer formatter firmware.

Regarding claim 5, Young discloses an office machine (printer 5, fig 1) comprising:

- a laser print engine (different types of printers can be used, col. 3, lines 34-35, laser printer is well known in the art) for rendering images; and
- PC card slot (PC card slot 83, fig. 1) coupled to the laser print engine for receiving a removable PC card that includes a printer controller, wherein the PC card slot is utilized to transfer output from the printer controller to the laser print engine, wherein the office machine requires the PC card with printer controller (*printer 5 requires PC card 7 to operate, col. 1, lines 53-60 and col. 2, lines 9-38*) to be coupled thereto to render images, and wherein a defective printer controller may be replaced by an operational printer controller or an out-dated printer controller may be upgraded with a new printer controller by removing the PC card (*a defected PC card can be replaced and/or upgraded with a new PC card, which is well known in the art*) with the defective or old printer controller from the office machine and inserting a new PC card with the operational or new printer controller into the office machine.

Regarding claim 6, Young No further discloses the office machine of claim 5 further comprising: a print engine ready data interface (cable 76, fig. 1) for coupling to a PC card and selectively receiving print engine ready data therefrom.

Regarding claim 7, Young No further discloses the office machine of claim 5 wherein the office machine is one of a laser printer, inkjet printer (inkjet printer 5, fig. 1), and all-in-one office machine.

Regarding claim 8, Young No further discloses a removable PC card (PC card 7, fig. 1) for removably coupling with corresponding card slot (printer 5 with PC slot 83, fig. 1) in a laser (different types of printers can be used, col. 3, lines 34-35, laser printer is well known in the art) office machine comprising:

- a printer controller integrated circuit (PC card includes a CPU for processing image/print data, fig. 2, col. 4, lines 39-45) for providing printer controller functions; and
- a connector (connector 41, fig. 1) having a print engine ready data interface for coupling to the office machine (couple to office machine via slot 83, fig. 1) and selectively (PC card interface, fig. 3) receiving print engine ready data therefrom;
- wherein the PC card is adapted for insertion into a corresponding PC card slot (adapted to insert via slot 83, fig. 1) in the laser office machine and wherein the formatter integrated circuit may provide printer controller functions (i.e. printing instructions, col. 2, lines 25-38 and col. 39-45) to the laser office machine when coupled thereto, wherein a defective printer controller may be replaced by an operational printer controller (*a defected PC card can be replaced and/or upgraded with a new PC card, which is well known in the art*) or an out-dated printer controller may be upgraded with a new printer controller by removing the PC card with the defective or old printer controller from the laser office machine and by inserting a new PC with the operational or new printer controller into the laser office machine.

Regarding claim 9, Young No further discloses a connector (connector 41, fig. 1) having a print engine ready data interface for coupling to the host machine (couple to office machine and image system fig. 1, col. 6, lines 1-5) and selectively (PC card interface, fig. 3) receiving print engine ready data therefrom.

Regarding claims 16-18, Tsukamoto further teaches the removable PC card includes a form factor that is one of a form factor of the PCMCIA type I card a form factor of PCMCIA

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type II card, and a form factor of PCMCIA type III card. Types of PCMCIA PC card is widely available and known in the art.

### ***Response to Arguments***

Applicant's arguments, see pages 8-10, filed 10/14/05, with respect to the rejection(s) of claim(s) 1, 5-7 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of different interpretations of previous applied arts of record (US 6587140 to Young No).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 4316720 to Ackerman, teaches an example of replacing a defected PC card with new compatible PC card.
- US 6538687 to Saito et al, teaches an example of replacing a defected PC card with new compatible PC card.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

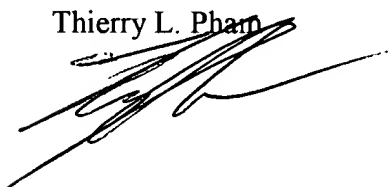

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

A handwritten signature in black ink, appearing to read 'Thierry L. Pham', with a stylized, sweeping flourish extending to the right.A handwritten signature in black ink, appearing to read 'Gabriel Garcia', with a stylized, flowing script.

GABRIEL GARCIA  
PRIMARY EXAMINER